

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/784,969 Confirmation No. : 8998  
First Named Inventor : Hans-Walter SWIDERSKY  
Filed : February 25, 2004  
TC/A.U. : 1793  
Examiner : KS. STONER

Docket No. : 037110.50643D1  
Customer No. : 23911

Title : Brazing Flux for Dry Application

**REPLY TO FINAL OFFICE ACTION**

**Mail Stop AF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is a Reply to the Final Office Action mailed November 2, 2007 in the above-identified patent application.

The indefiniteness rejection of claims 1-4 under 35 U.S.C. §112, second paragraph, is respectfully traversed, and reconsideration and withdrawal thereof are respectfully requested.

The essential inquiry pertaining to the requirement for definiteness is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. See MPEP 2172.02.

Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (i) the content of the disclosure;
- (ii) the teachings of the prior art; and
- (iii) the claim interpretation that would be given by one possessing an ordinary level of skill in the pertinent art at the time the invention was made.

Applicants submit that the cumulative particle volume distribution tables recited in independent claims 1 and 2 set forth the distribution of flux particles

with a reasonable degree of clarity and particularity. Indeed, they have a clear and readily ascertainable meaning to a person of ordinary skill in the art.

It must be kept in mind that the tables are cumulative particle size distribution tables. A cumulative particle size distribution table lists the proportion of particles up to a given size. That means that the values given in the table represent not only the particles having the indicated size, but also all smaller particles up to the indicated size. In other words, the values represent the cumulative proportion of particles having diameters equal to or less than the indicated value. That is the meaning of cumulative distribution.

The Office Action asserts that there is insufficient instruction as how to read the tables, and that the particle size values recited in the tables read "solely on the specific particle size." This is not correct. To the contrary, the specification includes several examples and definitions that teach how the information in the tables is read.

A careful review of the originally-filed disclosure, including Tables A and B on pages 4 and 5, the definitions and examples on pages 7 and 8, the additional examples set forth on pages 13 and 14, and Figures 10 and 11, provides ample instruction as how to properly read the tables.

For example, on page 4 of the specification, the footnote to Table A includes an example for  $x = 12.5$  microns. The footnote explicitly defines  $x=12.5$  microns as corresponding to particles having "a diameter of 12.5 microns or less," i.e., up to 12.5 microns. Thus, it is clear that the particle sizes recited in the tables do not refer solely to particles having a specific diameter (e.g., 12.5 microns) as interpreted in the Final Office Action, but instead represent a cumulative particle size and refer to particles having a diameter up to the value indicated (e.g., up to 12.5 microns). It should also be noted that this cumulative particle volume distribution nature of the tabular data is explicitly recited by claims 1 and 2.

Referring still to Table A on page 4 of the specification, the 40 vol.% value for  $x = 12.5$  microns is reported as a lower limit value (Q3 [%] lower limit). As

clearly set forth in the footnote for Table A, this means that at least 40 vol.% of the sample is made up of particles having a diameter of 12.5 microns or less (where 'at least' corresponds to the fact that 40 vol.% represents the lower limit).

Applicants note that the specification also provides a definition for the Q3 values used in the tables. Referring to page 7, lines 26 and 27, Q3 is defined as "the cumulative volume percentage of the particles up to the diameter listed." Thus, the Examiner's assertion that the cumulative language does not require the "up to" limitation is altogether incorrect and inconsistent with the content of the disclosure.

Finally, although it may be true that the claim term "up to" has been determined in **some factual situations** to include zero as a lower limit, in the present case it is clear that zero values are not included. The interpretation that the entire particle size column "reads on zero" is not reasonable in the situation of the present application. The claims unambiguously call for flux particles, and a particle with a zero diameter does not exist and is no particle at all. Moreover, such an interpretation is not consistent with the requirement that the claims set forth the invention with a reasonable degree of clarity and particularity, nor is it consistent with the interpretation that would have been given to the tables by one of ordinary skill, particularly when taken in conjunction with the examples, definitions and figures set forth in the originally-filed disclosure. In the context of the disclosure of the specification, a skilled artisan would never conclude that the "entire particle size column reads on zero." Such a result would be a sample comprising only zero micron particles, i.e., no sample at all, and is unquestionably not a reasonable interpretation of the claims.

For the foregoing reasons, when the cumulative particle distribution tables of claims 1 and 2 are properly considered as cumulative particle distribution tables, it is apparent that they have a clear and readily ascertainable meaning to a person of ordinary skill in the art and are not indefinite. Reconsideration and withdrawal of the indefiniteness rejection are accordingly, respectfully requested.


The application is respectfully submitted to be in condition for allowance, and prompt, favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned at (202) 624-2845 would be appreciated since this should expedite the examination of the application.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #037110.50643D1).

Respectfully submitted,

January 31, 2008

  
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